WHAT IS CLAIMED IS:

1. A method of making a molded component having a molded-in surface texture, using a molding apparatus including a front mold having a front mold surface with a front mold surface texture, and a back mold having a back mold surface opposed to said front mold, said method comprising the following steps:

a) providing a cover sheet including a skin film comprising a skin film material, and a foam backing comprising a foam backing material;

b) heating said cover sheet so as to heat said skin film to a first temperature equal to or above a melting temperature of said skin film material, and so as to heat said foam backing to a second temperature below a melting temperature of said foam backing material;

c) arranging said cover sheet between said front mold and said back mold with said skin film facing toward said front mold and said foam backing facing toward said back mold, and then moving at least one of said front mold and said back mold relatively toward each other with said cover sheet therebetween;

d) molding said cover sheet and bringing said skin film into direct contact with said front mold surface so as to mold into said skin film a molded-in surface texture that is the inverse of said front mold surface texture; and

e) after said step d), cooling said cover sheet and moving apart at least one of said front mold and said back mold relative to each other.

2. The method according to claim 1, wherein said step b) is carried out so that said skin film material of said skin film is transformed from a solid state to a melted viscous liquid state, and so that said foam backing material is maintained in an elastic foam solid state, and wherein said step d) is carried out with said skin film material of said skin film initially still in said melted viscous liquid state.

3. The method according to claim 2, wherein said step d) comprises introducing a pressurized pressure medium into a gap between said foam backing and said back mold surface, so that said pressure medium presses said foam backing uniformly toward said front mold surface so as to uniformly achieve said bringing of said skin film into direct contact with said front mold surface, and further comprises applying a vacuum between said skin film and said front mold surface.

4. The method according to claim 1, wherein said step d) comprises introducing a pressurized pressure medium into a gap between said foam backing and said back mold surface, so that said pressure medium presses said foam backing uniformly toward said front mold surface so as to achieve said bringing of said skin film into direct contact with

said front mold surface, and further comprises removing air from between said skin film and said front mold surface.

5. The method according to claim 4, wherein said removing of air comprises passive venting of air as said pressure medium presses said foam backing toward said front mold surface.

6. The method according to claim 5, further comprising, after said passive venting of air, applying a vacuum between said front mold surface and said skin film.

7. The method according to claim 4, wherein said removing of air comprises applying a vacuum between said front mold surface and said skin film.

8. The method according to claim 7, wherein said vacuum has a degree of gage vacuum of 0.05 to 0.3 bar below atmospheric pressure.

9. The method according to claim 4, wherein said pressurized pressure medium is introduced into said gap and maintained at a gage pressure in a range from 1 to 30 bar.

10. The method according to claim 9, wherein said gage pressure is in a range from 5 to 20 bar.

11. The method according to claim 4, wherein said pressurized pressure medium is compressed air.

12. The method according to claim 4, wherein said step c) further comprises forming a pressure-tight seal between said foam backing and said back mold surface around a perimeter of said back mold.

13. The method according to claim 4, wherein said pressurized pressure medium comprises a foaming polymer resin that generates a pressurizing pressure in said gap between said foam backing and said back mold surface as said resin expands and forms a foam.

14. The method according to claim 4, wherein said step c) comprises a mechanical pre-molding of said cover sheet against said back mold surface and toward said front mold surface as at least one of said front mold and said back mold moves relatively toward each other, and wherein said introducing of said pressurized pressure medium in said step d) causes a blow-molding of said cover sheet in addition to said mechanical pre-molding.

15. The method according to claim 1, wherein said step b) is carried out so that said first temperature of said skin film is in the range from 40°C to 70°C higher than said second temperature of said foam backing.

16. The method according to claim 1, wherein said step b) is carried out so that said first temperature of said skin film is in the range from 190°C to 210°C and said second

temperature of said foam backing is in the range from 130°C to 150°C.

17. The method according to claim 1, wherein said cover sheet is oriented with said skin film facing upwardly and said foam backing facing downwardly throughout all of said steps.

18. The method according to claim 1, wherein said step b) comprises contacting said foam backing with a tempered plate and directing heat radiation from an infrared heater at said skin film.

19. The method according to claim 1, further comprising tempering said front mold and said back mold so as to maintain a temperature of said front mold surface and said back mold surface in the range from 50°C to 60°C.

20. The method according to claim 1, wherein said foam backing material is a substantially closed-cell foam that is not air permeable through a thickness thereof, and said skin film material is a thermoplastic polyolefin.

21. The method according to claim 20, wherein said foam backing material comprises a different polymer material than said thermoplastic polyolefin.

22. The method according to claim 20, wherein said foam backing material also comprises said thermoplastic polyolefin.

23. The method according to claim 1, wherein said foam backing material comprises a polypropylene foam and said skin film material comprises a polypropylene film.

24. The method according to claim 1, further comprising, after said step e), introducing a substrate material between said foam backing and said back mold surface, and then moving at least one of said front mold and said back mold relatively toward each other, so that said back mold surface presses against said substrate material and molds and bonds said substrate material onto said foam backing so as to form a molded substrate from said substrate material.

25. The method according to claim 24, wherein said substrate material is a pre-heated sheet of at least one composite material selected from the group consisting of polypropylene and natural fibers, polypropylene and polyester fibers, and polypropylene and glass fibers.

26. The method according to claim 24, wherein said substrate material is a polyurethane foam.

27. The method according to claim 24, wherein said introducing of said substrate material comprises one of injecting, spraying, pouring and casting said substrate material in a viscous liquid state.

28. The method according to claim 24, wherein said step d) comprises introducing a pressurized pressure medium into a gap with a defined gap spacing size between said foam backing and said back mold surface, and wherein said introducing of said substrate material comprises introducing said substrate material into said gap with said defined gap spacing size between said foam backing and said back mold surface that had been occupied by said pressure medium in said step d).

29. The method according to claim 1, wherein said molded-in surface texture comprises one of an artificial leather grain, an artificial wood grain, a raised text, an indented text, a raised logo, an indented logo, a geometric repetitive pattern of protrusions, and a geometric repetitive pattern of indentations.

30. A method of making a molded component using a molding apparatus including a front mold having a front mold surface with a front mold surface texture, and a back mold having a back mold surface opposed to said front mold, said method comprising the following steps:

a) providing a cover sheet including a skin film comprising a skin film material, and a foam backing comprising a foam backing material;

b) heating said cover sheet so as to heat said skin film to a first temperature equal to or above a melting temperature of said skin film material, and so as to

heat said foam backing to a second temperature below a melting temperature of said foam backing material;

c) arranging said cover sheet between said front mold and said back mold with said skin film facing toward said front mold and said foam backing facing toward said back mold, and then moving at least one of said front mold and said back mold relatively toward each other with said cover sheet therebetween, so as to mechanically pre-mold said cover sheet toward said front mold surface;

d) forming a pressure-tight seal between said foam backing and said back mold surface, and introducing pressurized air at a pressure in a range from 1 bar to 30 bar into a gap between said foam backing and said back mold surface so as to blow-mold said cover sheet and press said skin film against said front mold surface and thereby mold into said skin film a molded-in surface texture that is an inverse of said front mold surface texture;

e) during said step d), venting air from between said skin film and said front mold surface;

f) applying a vacuum between said skin film and said front mold surface;

g) moving apart at least one of said front mold and said back mold relative to each other; and

h) introducing a substrate material between said foam backing and said back mold surface, and then moving at least one of said front mold and said back mold relatively toward each other, so that said back mold

surface presses against said substrate material and molds and bonds said substrate material onto said foam backing so as to form a molded substrate from said substrate material.

31. An apparatus for making a molded component having a molded-in surface texture, comprising a front mold tool and a back mold tool, wherein:

said front mold tool comprises a front mold having a front mold surface with a front mold surface texture that has been engraved, milled, stamped, embossed or etched into said front mold surface;

said front mold tool has a vacuum plenum therein, and a vacuum port that communicates into said vacuum plenum and is adapted to be connected to a source of vacuum;

said front mold tool has a plurality of vacuum holes communicating therethrough from said front mold surface to said vacuum plenum;

said back mold tool comprises a back mold having a back mold surface opposed to said front mold surface, an air supply port adapted to be connected to a supply of pressurized air, a plurality of air holes in said back mold surface, and at least one air passage communicating from said air supply port to said air holes; and

said back mold tool further comprises a perimeter seal frame that is connected to said back mold and extends around a perimeter of said back mold, and that forms a pressure-tight seal between said front mold and said back mold when said molds are closed toward each other.

32. The apparatus according to claim 31, wherein said front mold is a massive steel front mold, and each one of said vacuum holes includes a respective laser-bored hole that opens through said front mold surface.

33. The apparatus according to claim 32, wherein each said laser-bored hole has a diameter not greater than 0.5 mm.

34. The apparatus according to claim 32, wherein each one of said vacuum holes further includes a mechanically-bored hole that has a larger diameter than said laser-bored hole and that extends and communicates from said laser-bored hole to said vacuum plenum.

35. The apparatus according to claim 31, wherein said front mold comprises a galvanically formed zinc mold, and each one of said vacuum holes comprises a chemically etched or milled pore hole through said zinc mold.